



3 0402 00188 6961

IEEE 100

THE
AUTHORITATIVE
DICTIONARY
OF IEEE STANDARDS TERMS
SEVENTH EDITION

Best Available Copy



Published by
Standards Information Network
IEEE Press

Trademarks and disclaimers

IEEE believes the information in this publication is accurate as of its publication date; such information is subject to change without notice. IEEE is not responsible for any inadvertent errors.

Other tradenames and trademarks in this document are those of their respective owners.

*The Institute of Electrical and Electronics Engineering, Inc.
3 Park Avenue, New York, NY, 10016-5997, USA*

Copyright © 2000 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved. Published December 2000. Printed in the United States of America.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

To order IEEE Press publications, call 1-800-678-IEEE.

Print: ISBN 0-7381-2601-2

SP1122

See other standards and standards-related product listings at: <http://standards.ieee.org/>

The publisher believes that the information and guidance given in this work serve as an enhancement to users, all parties must rely upon their own skill and judgement when making use of it. The publisher does not assume any liability to anyone for any loss or damage caused by any error or omission in the work, whether such error or omission is the result of negligence or any other cause. Any and all such liability is disclaimed.

This work is published with the understanding that the IEEE is supplying information through this publication, not attempting to render engineering or other professional services. If such services are required, the assistance of an appropriate professional should be sought. The IEEE is not responsible for the statements and opinions advanced in this publication.

Library of Congress Cataloging-in-Publication Data

IEEE 100 : the authoritative dictionary of IEEE standards terms.—7th ed.
p. cm.

ISBN 0-7381-2601-2 (paperback : alk. paper)

1. Electric engineering—Dictionaries. 2. Electronics—Dictionaries. 3. Computer engineering—Dictionaries. 4. Electric engineering—Acronyms. 5. Electronics—Acronyms. 6. Computer engineering—Acronyms. I. Institute of Electrical and Electronics Engineers.

TK9 .J28 2000
621.3'03—dc21

00-050601

Cor

Intro

How

Categ

Trad

The /

Abstr

Non-I

REST AVAILABLE

The Autl

crossover frequency. *See also*: phonograph pickup.

(SP) [32]

transition impedance A resistor or reactor consisting of one or more units that bridge adjacent taps for the purpose of transferring load from one tap to the other without interruption or appreciable change in the load current, at the same time limiting the circulating current for the period that both taps are used. Normally, reactance-type LTCs use the bridging position as a service position and, therefore, the reactor is designed for continuous loading. (PE/TR) C57.131-1995

transitioning (as applied to fall protection) The act of moving from one location to another on equipment or a structure. (NESC/T&D/PE) C2-1997, 1307-1996

transition joint (power cable joints) A cable joint which connects two different types of cable. (PE/IC) 404-1986s

transition load (1) (rectifier circuits) The load at which a rectifier unit changes from one mode of operation to another. *Note*: The load current corresponding to a transition load is determined by the intersection of extensions of successive portions of the direct-current voltage-regulation curve where the curve changes shape or slope. *See also*: rectifier circuit element; rectification. (IA) [12]

(2) The load at which a thyristor converter changes from one mode of operation to another. *Note*: The load current corresponding to a transition load is determined by the intersection of extensions of successive portions of the direct-voltage regulation curve where the curve changes shape or slope. (IA/IPC) 444-1973w

transition loss (1) (A) (wave propagation) At a transition or discontinuity between two transmission media, the difference between the power incident upon the discontinuity and the power transmitted beyond the discontinuity that would be observed if the medium beyond the discontinuity were match-terminated. (B) (wave propagation) The ratio in decibels of the power incident upon the discontinuity to the power transmitted beyond the discontinuity that would be observed if the medium beyond the discontinuity were match terminated. *See also*: waveguide. (MTT) 146-1980

(2) (junction between a source and a load) The ratio of the available power to the power delivered to the load. Transition loss is usually expressed in decibels. *See also*: waveguide; transmission loss. (MTT) 146-1980w

transition matrix A matrix which maps the state of a linear system at one instant of time into another state at a later instant of time, provided that the system inputs are zero over the closed time interval between the two instants of time. *Note*: This is also the matrix of solutions of the homogeneous equations. *Synonym*: fundamental matrix. (CS/PE/EDPG) [3]

transition point (1) A point in a transmission system at which there is change in the surge impedance. (CAS/PE) [8], [84]

(2) The input value that causes 50% of the output codes to be greater than or equal to the upper code of the transition, and 50% to be less than the upper code of the transition. (IM/WM&A) 1057-1994w

transition pulse (pulse waveform) That segment comprising a change from one amplitude level to another amplitude level. *See also*: pulse. (IM/HFIM) [40]

transition region (semiconductor) The region, between two homogeneous semiconductor regions, in which the impurity concentration changes. *See also*: semiconductor; transistor. (AES/SS) 307-1969w

transition shape (A) (pulse terminology) For descriptive purposes a transition waveform may be imprecisely described by any of the adjectives, or combinations thereof, in descriptive adjectives, major (minor); polarity related adjectives; geometrical adjectives, round; and functional adjectives. When so used, these adjectives describe general shape only, and no precise distinctions are defined. (B) (pulse terminology) For tutorial purposes, a hypothetical transition waveform may be precisely defined by the further addition of the adjective ideal.

(C) (pulse terminology) For measurement or comparison purposes a transition waveform may be precisely defined by the further addition of the adjective reference. (IM/WM&A) 194-1977

transition time (gas-tube surge protective devices) The time required for the voltage across a conducting gap to drop into the arc region after the gap initially begins to conduct. (SPD/PE) C62.31-1987r

transitive dependency A type of dependency among attributes in a relation, in which a nonprime attribute A is said to be transitively dependent on another attribute B if and only if there is another attribute C that is functionally dependent on B and functionally determining A but not B. *Contrast*: non-transitive dependency. (C) 610.5-1990w

transitron oscillator A negative-transconductance oscillator employing a screen-grid tube with negative transconductance produced by a retarding field between the negative screen grid and the control grid that serves as the anode. *See also*: oscillatory circuit. (AP/ANT) 145-1983s

transit time (1) (electron tube) The time taken for a charge carrier to traverse a given path. *See also*: electron emission. (ED) [45]

(2) (multiplier-phototube) The time interval between the arrival of a delta-function light pulse at the entrance window of the tube and the time at which the output pulse at the anode terminal reaches peak amplitude. *See also*: electron emission; phototube. (ED) 158-1962w

transit-time mode (electron tube) A condition of operation of an oscillator corresponding to a limited range of drift-space transit angle for which the electron stream introduces a negative conductance into the coupled circuit. (ED) 161-1971w

transit-time spread (1) (electron tube) The time interval between the half-amplitude points of the output pulse at the anode terminal, arising from a delta function of light incident on the entrance window of the tube. *See also*: phototube. (ED) 158-1962w

(2) (scintillation counting) The FWHM (full-width-at-half-maximum) of the time distribution of a set of pulses each of which corresponds to the photomultiplier transit time for that individual event. (NPS) 398-1972r

translate (1) (A) To convert expressions in one language to synonymous expressions in another language. (B) To encode or decode. *See also*: matrix; translator. (C) 162-1963

(2) (data management) To transform data from one language to another. (C) 610.5-1990w

translation (1) (telecommunications) The process of converting information from one system of representation into equivalent information in another system of representation. (COM) [49]

(2) (computer graphics) The displacement of one or more display elements without rotation, maintaining its orientation. (C) 610.6-1991w

(3) In a single-cable 10BROAD36 system, the process by which incoming transmissions at one frequency are converted into another frequency for outgoing transmission. The translation takes place at the headend. (C/LM) 802.3-1998

translation buffer A set of registers in a memory management unit in which virtual addresses are converted to physical addresses. *Note*: Typically the complete map of translations will not fit into the memory management unit at one time so only a portion are buffered there while the entire map is in main storage. (C) 610.10-1994w

translation loss (playback loss) (reproduction of a mechanical recording) The loss whereby the amplitude of motion of the reproducing stylus differs from the recorded amplitude in the medium. *See also*: phonograph pickup. (SP) [32]

translation manager A facility that maps X event sequences (such as keyboard actions) into widget-supplied functionality (action procedures). (C) 1295-1993w

translator (1) (software) A computer program that transforms a sequence of statements expressed in one language into an

equivalen
guage. S.
(2) (tele
interpreting
other for
(3) (test,
omatic i
guage m
machine
must be

(4) (bro:
sion dev:
vide gain
bound fr

translitera
ter-by-cl

(2) (dat:
phabet t

transmissi
equipme

transmissi
a signal.
cation t
(2) (lase

(3) (illu
by whic
other th
Note: T
of regul
mission
(4) The
intellige
sual me

transmiss
range a

transmiss
charact

transmis:
given fi
tity ass
erence

wave a
sion co
quantiti
voltage
fined a
strengtl
of othe
special
ated w
cident;
equal t

(2) (m
emergi
less te
cident
tering
(3) Se
transmis
used t
charac
transfe
fer. Sy